

The Lamarckian names for *Oliva* species (Studies on Olividae. 23)

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SUMMARY. The nomenclatural status of the *Oliva* names introduced by Lamarck (1811 and 1822) has been re-examined. Of his 48 names, 11 have been retained as valid.

RESUME. Le statut nomenclatural des noms d' *Oliva* introduits par Lamarck (1811 et 1822) a été réexaminé. De ces 48 noms, 11 ont été retenus comme valides.

KEYWORDS. Mollusca, Gastropoda, Olividae, *Oliva*, nomenclature.

1. INTRODUCTION

This paper is the continuation of a previous work (TURSCH & al., 1994), in which all the *Oliva* names from Linnaeus to Perry were reviewed, in chronological order. We now have to deal with the *Oliva* names of Lamarck.

Jean-Baptiste Pierre Antoine de Monet, chevalier de la Marck (the name was prudently changed into "Lamarck" during the French Revolution) was born on August 1st, 1744 in Northern France. A short military career (during which he became fascinated by botany) was interrupted by an accident, and for a while Lamarck had to survive partly through trading in rare and valuable shells, a field in which he soon became an expert (DELAUNAY, 1994). Lamarck began his real scientific life as a botanist around 1778, and started a career in zoology only in 1793 (at the age of 50), when he was appointed as Professor of Zoology at the newly created Muséum d'Histoire Naturelle in Paris. Lamarck died on December 18, 1829.

It is unfair that today most people would link the name of Lamarck only with his theory of the heredity of acquired characters, now discredited. This was actually only a small part of the system of Lamarck. One of the most brilliant scientists of his time, a father of comparative anatomy and modern systematics, he was a pioneer of evolution, and probably the first to conceive an explicit phylogenetic tree of real organisms. His influence on biology is still deeply felt today. Lamarck was a scientific philosopher, concerned with a unifying theory in zoology. Although he described many species of Olives, it is unlikely that the genus *Oliva* was at the centre of his preoccupations.

Even before his appointment at the Muséum, Lamarck had already assembled a large collection of mollusc shells (at least fifty thousand specimens belonging to 13,288 species) and many of his descriptions are based upon his own material. Lamarck offered his collection to the French government for the sum of 30.000 livres but the offer was refused. After his death, the collection went to Prince Masséna who, in 1840, sold it to Baron Benjamin Delessert. It was later acquired by the Muséum d'Histoire Naturelle in Geneva (see DANCE, 1966). Most unfortunately, all of Lamarck's *Oliva* type material seem to have vanished and cannot be located anymore.

The absence of type specimens raises serious problems of identification because some species are based upon ambiguous illustrations. Worse, some species are not figured at all; Lamarck's indifference to illustrations is well known and has caused many problems of identity (see DANCE, 1966: 115). The problem is compounded by the fact that most species of *Oliva* differ by characters that are very difficult to describe in words. Very few *Oliva* species indeed can be unambiguously recognised from their original description, without referring to illustrations.

Nomenclatural stability has been our main concern. Many of Lamarck's familiar *Oliva* names (such as *irisans*, *mustelina*, *peruviana*, *undatella*) would have to be discarded as nomen dubium if judged exclusively on the merits of their original description. Fortunately these names are rescued by the magnificently illustrated work of Duclos, the first revisor of Lamarck. Duclos was a lifelong student and avid collector of *Oliva*, of which he possessed about fifteen thousand specimens. We can use

Duclos for interpreting Lamarck because one can prove that he was most familiar with the old master's *Oliva* collection, which he revised in detail. His conclusions were discussed with and approved by Lamarck himself. In DUCLOS (1845: 2), we find a moving account of this:

"... Lamarck venait de composer pour ce genre soixante-deux espèces à l'état vivant, et, malgré toutes les recherches que j'avais pu faire pour me les procurer, je n'étais parvenu qu'à un nombre bien moindre, et qui ne dépassait pas quarante. Je dus en augurer que celles qui me manquaient pouvaient bien n'être pas réelles et ne constituer que de simples variétés: il fallait donc de toute nécessité recourir à la collection de ce professeur, car c'est uniquement sur elle qu'il établit son système; il n'emprunta presque rien à celle du Muséum. Mais, à cette époque, il était déjà complètement aveugle. Cependant, il m'autorisa à faire cette vérification, en me témoignant le désir qu'elle fut faite devant lui, et, au fur et à mesure que mes prévisions se justifiaient, qu'une espèce, qui m'avait tant fait courir pour la posséder, n'était qu'une simple variété d'une autre qui me paraissait devoir en être le type, il demandait à la tenir, et sous ses doigts, aussi clairvoyants qu'investigateurs, il reconnaissait, à l'aide de mes observations, que je disais la vérité, et que c'était lui qui s'était trompé; car il est bon qu'on sache que, lorsqu'il décrivit son genre *Olive*, ses yeux étaient déjà trop faibles pour qu'il parvint à les distinguer les unes des autres. Ce qui le frappa le plus dans mes remarques, ce fut son *Olive* harpulaire, qui ne différait de la réticulaire que par des signes d'accroissement plus prononcés, signes que l'on retrouva dans toutes les autres espèces. Il manifesta en termes sévères les regrets qu'il éprouvait d'avoir été si mal entouré. Ma rectification réduisit le nombre de ses espèces à quarante-deux; c'était un tiers de moins. Tout autre homme aurait pu montrer un peu d'humeur; mais lui, si juste en toutes choses, si passionné pour le progrès de la science, loin de se plaindre, ne vit dans cette réduction qu'une chose utile, indispensable; et ce fut lui qui me contraignit de faire à ce sujet un mémoire à l'Académie des sciences, m'assurant, disait-il, qu'il se placerait près de moi quand je le lirais, pour affirmer à ses collègues que ce que j'annonçais était contrôlé par lui."

Duclos can certainly not be suspected of being biased against Lamarck. On the title page of Duclos (1835) he introduces himself (in large, bold font) as "*élève de Lamarck*". The work itself is dedicated "*A la mémoire de Lamarck, créateur de la science conchyliologique, hommage de vénération et de profond respect de son élève J.P. Duclos*". It is therefore quite safe to refer to the opinion of Duclos to establish the identity of the non-

illustrated taxa, for which Lamarck's descriptions are insufficient. Most of the type specimens of Duclos are still preserved at the Muséum d'Histoire Naturelle in Paris and the bulk of his collection is in the Museum of Clermont-Ferrand, France. The identity of most of the species of Duclos is thus quite secure. For the dates of the publications of DUCLOS (often erroneously quoted), see SHERBORN & SMITH, (1911). References will be made here to DUCLOS (1844-48), containing all the illustrations of DUCLOS (1835-40) with, in addition, a good descriptive text.

After a definition of the genus *Oliva* (LAMARCK, 1801), most of Lamarck's *Oliva* species were published in LAMARCK (1811), often referring to illustrations in the Plates 361 to 368 of LAMARCK (1798), the *Tableau Encyclopédique et Méthodique des trois règnes de la Nature*, here after referred to as "Encycl". (for dates of publication, see SHERBORN & WOODWARD, 1906). Exactly the same descriptions appear in LAMARCK (1817). Some new species are described in LAMARCK (1822). The second and the third edition of Lamarck's *Histoire Naturelle des Animaux sans vertèbres* were edited by Deshayes in collaboration with Milne-Edwards (see IREDALE, 1922).

2. THE SPECIES.

Three categories of names have not been considered here:

- a. Names given by previous authors. These are: *carneola* (sp. n° 39), *ispidula* (sp. n° 40), *porphyria* (sp. n° 1). These names have been reviewed in TURSCH & al. (1994).
- b. Names referring to species that are not in the genus *Oliva*. These are *acuminata* (sp. n° 48), *auricularia* (sp. n° 47), *brasiliiana* (sp. n° 45), *conoidalis* (sp. n° 54), *eburnea* (sp. n° 56), *hiatula* (sp. n° 52), *luteola* (sp. n° 50), *nana* (sp. n° 57), *oryza* (sp. n° 59), *subulata* (sp. n° 49), *testacea* (sp. n° 51), *utriculus* (sp. n° 46), *volutella* (sp. n° 43), *zonalis* (sp. n° 58).
- c. Names referring to fossil species.

Names are reviewed in alphabetical order, for the facility of the reader. Some frequent misspellings and misquotations of Lamarck have been included in this list.

Detailed discussion of the original descriptions is not given for objective junior synonyms, where in any case no alternative taxonomic status is possible. In all other cases, in order to allow verification of our conclusions, the original description is given

verbatim, save for formatting of the text (here much compacted for the sake of space economy).

To avoid confusion, figures will be written "figs." when referring to illustrations in other works and "FIGS." when referring to illustrations in the present paper. The frequently used abbreviation "q.v." (*quod vide*) means "refer to".

"*alba* Lamarck" in Gray, 1858 (*Proc. Zool. Soc. Lond.* 26: 44).

This is cited by GRAY (1858) as a synonym of *Strephona reticularis* Lamarck (Gray's sp. 12). *O. alba* Lamarck does not exist. Gray refers to sp. 42 of Lamarck, 1811, *candida*, for which "*alba*" is part of the Latin description (see BURCH & BURCH, 1960). This is a **misquotation**.

angulata Lamarck, 1811 (*Ann. Mus.* 16: 310, sp. n° 6).

DISCUSSION. The figures in *Encycl.* (Pl. 363, figs. 6a, 6b) very clearly depict *O. incrassata* (Lightfoot, 1786). This is confirmed by the description of DUCLOS (1845, text p.20 and 1840, Pl. 18, figs. 9, 10). Lamarck's reference to Martini's figs 499 and 500 (MARTINI, 1769), already used for establishing *incrassata* (Lightfoot, 1786) (see TURSCH & *al.*, 1994) makes it an **objective junior synonym** of *O. incrassata* (Lightfoot, 1786). This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969) and WAGNER & ABBOTT (1978).

araneosa Lamarck, 1811 (*Ann. Mus.* 16: 315, sp. n° 19).

DISCUSSION. The figures in *Encycl.* (Pl. 363, figs. 1a, 1b) possibly depict *O. spicata* (Röding, 1798) but more probably *O. reticularis* Lamarck, 1811. This is confirmed by DUCLOS (1845, text p.16) placing *O. araneosa* Lamarck in the synonymy of *O. reticularis* Lamarck. In any case, Lamarck's reference to Martini's figs 509 and 510 (MARTINI, 1769), already used for establishing *O. spicata* (Röding, 1798) (see TURSCH & *al.*, 1994) makes it an **objective junior synonym** of *O. spicata* (Röding, 1798). This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT, (1986).

avellana Lamarck, 1811 (*Ann. Mus.* 16: 320, sp. n° 37).

ORIGINAL DESCRIPTION: 37. Olive aveline. *Oliva avellana*. *O. Cylindrica, fulva, undis minimis vix perspicuis reticulata; spirâ retusâ*. Mus. n. 67. Mon Cabinet. Habite ... L' olive aveline paroît avoir de grands rapports avec l'olive glandiforme (*O. glandiformis*, p. 317, sp. 27, remark ours). Mais elle est plus cylindrique, moins bombée, et semble unicolore. Elle est rousse ou d'un fauve sale et roussâtre; ses ondes menues et en zigzag ne s'aperçoivent presque point. Sa spire est très-obtuse. Longueur, 35 millimètres.

LAMARCK (1822: 430, sp. n° 37) corrects "*fulva*" to "*fulvo-rubente*" and adds "*ore albedo*". Also : "ses ondes menues et en zigzag, et sa spire rétuse, la rendent très remarquable".

DISCUSSION. There is no illustration of this taxon. The description could apply to many small *Oliva* species and furthermore suggests a sun-burned shell, and the name *avellana* is indeed often applied today to all kinds of small reddish beach specimens. These doubts are confirmed by the description of DUCLOS (1845, text p. 26 and Pl. 30, figs. 1-3 and figs. 13, 14), depicting at least 3 different species. We see no way of identifying *O. avellana* and consider it as a **nomen dubium**. This taxon is considered valid for ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT, (1986).

"*O. avellana* Lamarck, 1811" is illustrated in ZEIGLER & PORRECA (1969, Pl. 13, fig. 11) by a common variation of *O. bulbiformis* DUCLOS, 1840 and in PETUCH & SARGENT, (1986, Pl. 4, figs. 1, 2) by a very pale shell with a reddish-brown aperture, bearing little resemblance with Lamarck's description (in particular: *ore albido*).

bicincta Lamarck, 1822 (*Hist. Nat.* 7: 429, sp. n° 33).

DISCUSSION. In the description, Lamarck refers to the illustrations in *Encycl.* (Pl. 364, figs. 1a, 1b) already used for *O. bicingulata* Lamarck, 1811 (q.v.), which is also cited in the synonymy. This makes *O. bicincta* Lamarck an **objective junior synonym** of *O. bicingulata* Lamarck, 1811. This is in agreement with WAGNER & ABBOTT (1978). DUCLOS (1845: 27) considers *O. bicincta* Lamarck (together with *O. bicingulata* Lamarck) as his variety 2 ("Avec deux fascies") of *O. inflata* Lamarck, 1811, the old name for *O. bulbosa* (Röding, 1798). It is *O. bulbosa* (Röding, 1798) for

BURCH & BURCH (1960) and PETUCH & SARGENT, (1986).

***bicingulata* Lamarck, 1811** (*Ann. Mus.* 16: 319, sp. n° 33).

ORIGINAL DESCRIPTION: 33. Olive à deux bandes. *Oliva bicingulata*. *O. Ovata, ventricosa, alba, pallidè punctata*; *fasciis duabus transversis fusco-fulvis*; *columellâ tuberculatâ*. Mus., n. 55. Encycl. pl. 364, f. 1. Habite ... Cette espèce est bien distincte des deux précédentes (*undata*, sp. n° 31, and *inflata*, sp. n° 32, remark ours) et cependant elle leur ressemble par sa forme générale, par sa spire courte et mucronée, enfin par les tubercules comprimés de sa columelle. Celle-ci est blanche, parsemée de points ou de gouttelettes d'un gris bleuâtre, et offre deux bandes transverses, brunes ou couleur de rouille. L'ouverture est blanche, quelquefois d'une couleur enfumée ou de chair livide. Longueur, 34 à 35 millimètres.

DISCUSSION. The figures in Encycl. (Pl. 364, figs 1a, 1b) (see FIGS. 1, 2) and the description unmistakably depict *O. bulbosa* (Röding, 1798). This is confirmed by DUCLOS (1845: 27) who considers *O. bicingulata* Lamarck as a form ("2. Var. Avec deux fascies") of *O. inflata* Lamarck, 1811, the old name for *O. bulbosa* (Röding, 1798). *O. bicingulata* Lamarck, 1811 is a **subjective junior synonym (colour form)** of *O. bulbosa* (Röding, 1798). This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT, (1986).

***candida* Lamarck, 1811** (*Ann. Mus.* 16: 322, sp. n° 42).

ORIGINAL DESCRIPTION: 42. Olive blanche. *Oliva candida*. *O. Ovato-cylindracea, alba, immaculata; spirâ subacutâ; costellis columellae remotiusculis*. Mus., n. 31. Encycl., pl. 368, f. 4. β. Var. couleur de soufre. Habite ... Une olive non fossile, toute blanche et sans taches quelconques, présente une particularité peu commune dans ce genre; et c'est le cas de l'espèce dont il est ici question, qui est caractérisée d'ailleurs par sa forme particulière. Sa longueur est de 33 ou 34 millimètres. Le bord supérieur de ses tours de spire est un peu marginé. Elle se rapproche par sa columelle de l'olive réticulaire (*O. reticularis* Lamarck, remark ours).

In LAMARCK (1822: 432, sp. n° 42) one finds a variant: "*plicis columellae remotiusculis*" ... [b] Var. *testâ pallidè citrinâ*. Mon cabinet. Habite ... Mon cabinet. La forme de celle-ci présente un léger renflement qui n'a point lieu dans les deux précédentes (*O. oriola*

Lamarck, 1811, sp. n° 41, and *O. ispidula* Lamarck, 1811, sp. n° 40, remark ours); et quant à sa coloration, elle est toute blanche, immaculée, sans être néanmoins fossile. Longueur, 15 lignes trois quarts.

DISCUSSION. The figures in Encycl. (Pl. 368, figs. 4a, 4b) (see FIGS. 3, 4) could equally well represent a fat *O. oliva* (Linnaeus, 1758) or some other shell, for instance an *O. amethystina* (Röding, 1798) without colour marks or the white Bahamas form of *O. reticularis* Lamarck, 1811. DUCLOS (1845: 16) cites *O. candida* Lamarck in the synonymy of *O. reticularis* Lamarck. The name *candida* Lamarck is often used to designate white shells of the "*O. oliva* complex" (TURSCH, MISSA & BOUILLON, 1992). It cannot be identified with any certainty and is a **nomen dubium**. This taxon has been considered as being *ispidula* (L.) by BURCH & BURCH (1960), a form of *O. oliva* by ZEIGLER & PORRECA (1969) and a colour form of *O. taeniata* Link, 1807 by PETUCH & SARGENT (1986). BURCH & BURCH (1967) doubt it is *O. oliva*.

"*cruentata* Lamarck" (auct.).

This is a frequent **misquotation**. There is no *cruentata* in Lamarck. There is a *O. cruenta* described (p. 612, sp. n° 14) in the 1844 re-edition of the "Histoire Naturelle des Animaux sans Vertèbres ... par J.B.P.A. de Lamarck, ... revue et augmentée par G.P. Deshayes et H. Milne Edwards", who should be credited with the authorship of the name because Lamarck died in 1829. It is a junior homonym of *O. cruenta* Dillwyn, 1817. "*O. cruentata* Lamarck" is cited as a synonym of *O. annulata* (Gmelin, 1791) by BURCH & BURCH (1960), ZEIGLER & ABBOTT (1978).

***decorticata* Lamarck, 1811** (*Ann. Mus.* 16: 319, sp. 34, var.)

DISCUSSION. The name *O. decorticata* is cited in the description of *Oliva harpularia* Lamarck, 1811 (*q.v.*) in the following terms: "La même dépouillée (*decorticata*) offrant des lignes longitudinales d'un rouge-brun, et un peu en zigzag. Mon Cabinet. Chemn. Conch. 10, t. 147, f. 1376 et 1377." This name is no longer used in LAMARCK (1822: 429, sp. n° 34). As *O. harpularia* Lamarck is a **nomen dubium**, this must also be a **nomen dubium**.

***dombeyana* Lamarck, 1811** (*Ann. Mus.* 16: 318, sp. n° 28, var. β).

DISCUSSION. The name *O. dombeyana* is cited in the description of *Oliva peruviana*

Lamarck, 1811 (*q.v.*) in the following terms: "β. La même plus colorée, plus rembrunie. *O. Dombeyana*. Habite les côtes du Pérou, d'où elle fut rapportée par Dombey. Cette olive constitue une espèce distincte, par sa forme particulière et ses couleurs". One will notice the apparent discrepancy (for modern biologists) between "*la même*" and "*espèce distincte*". This name is no longer used in LAMARCK (1822: 427, sp. n° 28) and can only designate a colour form of *O. peruviana* Lamarck, 1811.

***elegans* Lamarck, 1811** (*Ann. Mus.* 16: 312, sp. n° 11).

ORIGINAL DESCRIPTION: 11. Olive élégante. *Oliva elegans*. *O. Cylindracea, albida; lineis fuscis, subpunctatis, flexuoso-angulatis; spirâ retusâ mucronatâ*. Mus., n. 19. Encycl., pl. 367, f. 3. β. Var. à deux zones transverses. Encycl., pl. 362; f.3. List. Conch., t. 728, f. 15. Habite ... La coquille [α], très-bien représentée dans l'Encyclopédie, offre sur un fond blanchâtre des lignes de points bruns nombreuses, en grands zigzags presque transverses, et qui la rendent très-remarquable. L'ouverture est blanche, un peu teinte de couleur de chair au bas de la columelle. La spire est aplatie, mucronée. La variété β a ses lignes plus interrompues, le fonds plus coloré, et offre deux zones brunes plus ou moins complètes. La longueur de cette espèce est de 40 à 46 millimètres.

DISCUSSION. The figures in Encycl. (Pl. 367, figs. 3a, 3b) (see FIGS. 5, 6) are ambiguous and might possibly depict *O. tigrina* Lamarck, 1811 (*q.v.*). The other figures in Encycl., (Pl. 362; figs. 3a, 3b) (see FIGS. 7, 8) and that of LISTER (1682-95, Conch., t. 728, fig. 15) are quite compatible with the present, unanimous concept of *O. elegans*. The description in DUCLOS (1845: 24) and his clear illustrations (1840, Pl. 21, figs. 1-6 and 1840, Pl. 32, figs. 1-3) confirm the identity of *O. elegans* Lamarck, a **valid species**. This is in agreement with BURCH & BURCH (1967), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT, (1986).

***episcopalis* Lamarck, 1811** (*Ann. Mus.* 16: 313, sp. n° 12)

ORIGINAL DESCRIPTION: 12. Olive épiscopale. *Oliva episcopalis*. *O. Cylindracea, albida, punctis fusco-luteis nebulatâ; ore violaceo*. Mus. n. 10. List. Conch., t. 719, f. 3. Gualt. ind., t. 23, fig. F.T. Habite ... L'olive épiscopale est une espèce constamment distincte par la couleur d'un beau violet qui s'offre à son ouverture. Elle est blanche, mouchetée de

points bruns mêlés d'un peu de jaune ou d'orangé. Sa spire est convexe, terminée en pointe. Sa longueur est de 48 millimètres.

DISCUSSION. The cited figure of LISTER (1682-95, with the indication "*labro ... purpurascens*"), the description and the size leave no doubt on the identity of this shell. This taxon is furthermore very clearly illustrated by DUCLOS (1835, Pl. 10, figs. 11, 12). *O. episcopalis* Lamarck is a **subjective junior synonym** of *O. caerulea* (Röding, 1798). This is in agreement with WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986). The species was considered valid by ZEIGLER & PORRECA (1969).

***erythrostoma* Lamarck, 1811** (*Ann. Mus.* 16: 309, sp. n° 3).

DISCUSSION. The description and the good illustration in Encycl. (Pl. 361, fig. 3) leave no doubt about the identity of this taxon. This is further confirmed by DUCLOS (1845:18). Lamarck cites the figures 476 and 477 of MARTINI (1769), previously utilised to establish *O. miniacea* (Röding, 1798) (see TURSCH & al., 1994). This makes *O. erythrostoma* Lamarck an **objective junior synonym** of *O. miniacea* (Röding, 1798). This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***fabagina* Lamarck, 1811** (*Ann. Mus.* 16: 325, sp. n° 53).

ORIGINAL DESCRIPTION: 53. Olive féverolle. *Oliva fabagina*. *O. Brevis, ovata, albo fuscoque vel furvo variegatâ; spirâ brevi acutâ*. Encycl., pl. 363, f. 5. Martini, Conch. 2, t. 49, f. 532, 533. Habite ... Il n'y a point de doute que cette olive ne soit une espèce très-distincte de celles que l'on connoît, tant sa forme est particulière. Elle est singulièrement courte, relativement à sa largeur.

DISCUSSION. LAMARCK (1822: 437, sp. n° 56) gives no further information. Martini's fig. 533 has been previously used for *O. reticulata* (Röding, 1798) but is unidentifiable (see TURSCH & al., 1994). Martini's fig. 532 and the figures in Encycl. (Pl. 363, figs. 5a, 5b) (see FIGS. 9, 10) depict a shell that is rather diffomed but compatible with *O. bulbosa* (Röding, 1798). This is confirmed by DUCLOS (1845, pp. 26, 27) who considers *O. fabagina* Lamarck as his variety 6 ("*Flammulée avec fascies*") of *O. inflata* Lamarck, a name formerly used for *O. bulbosa* (Röding, 1798). *O. fabagina* Lamarck is a **subjective junior**

synonym (maybe a form) of *O. bulbosa* (Röding, 1798). This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***flammulata* Lamarck, 1811** (*Ann. Mus.* 16: 314, sp. n° 17).

ORIGINAL DESCRIPTION: 17. Olive flammulée. *Oliva flammulata*. *O. Cyllindræa*, *lineis fulvis et angulatis undata; maculis albis, trigono-acutis, transversis, inaequalibus; spirâ acutâ*. Mus., n. 13. Encycl., pl. 367, f. 3. Martini Conch. 2, t. 49, f. 526. Habite ... Cette espèce n'acquiert qu'une taille médiocre. Elle est cylindracée, peu ventrue, d'un gris roussâtre, nuée de linéoles anguleuses, d'un roux brun, et ornée de flammules ou taches blanches, trigones aiguës, et inégales, qui la rendent remarquable. Sa spire est pointue; sa longueur est de 3 centimètres.

DISCUSSION. LAMARCK (1822: 424, sp. n° 17) corrects the obvious missprint "Encycl., pl. 367, f. 3" (previously utilised for *O. elegans*) into "Encycl., pl. 367, f. 5". Both the description and the clear illustration in Encycl. (Pl. 367, fig. 5) (see FIG. 11) as well as Martini's figure 526 (MARTINI, 1769) agree with the present, unanimous concept of this species. This is confirmed by the description of DUCLOS (1844: 14) and his very clear illustrations of this variable shell (1835, Pl. 8, figs. 17-20) and even of the live animal (Pl. 32, figs. 3, 4). *O. flammulata* Lamarck is **valid**, in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***fulminans* Lamarck, 1811** (*Ann. Mus.* 16: 312, sp. n° 9).

ORIGINAL DESCRIPTION: 9. Olive foudroyante. *Oliva fulminans*. *O. Cyllindræa*, *apice retusa, cinereo-viridescens; lineis longitudinalibus flexuoso-angulatis fuscis; ore candido*. Mus., n. 8. Encycl., pl. 364, f. 4. Chemn. Conch. 10, t. 147, f. 1374. Habite ... Cette olive remarquable par ses lignes brunes, longitudinales et en zigzag, sur un fond d'un cendré verdâtre, se rapproche néanmoins des deux précédentes (*O. sepulchralis* Lamarck, 1811, sp. n° 8 and *O. maura* Lamarck, 1811, sp. n° 7, remark ours) par sa forme et sa spire très-courte; néanmoins les collections consultées, montrent qu'elle en est constamment distincte. Sa longueur est de 53 millimètres: elle n'est pas commune.

LAMARCK (1822: 421, sp. n° 9) has the same description in Latin but much shorter in French: "Habite Mon cabinet. Spire très-

rétuse; callosité du sommet de la columelle un peu forte et saillante. Longueur, 23 lignes".

DISCUSSION. The figure 1374 of CHEMNITZ (1786) is compatible with *O. nigrita* (Karsten, 1789), of which *O. vidua* (Röding, 1798) is an objective junior synonym (see TURSCH & al., 1994) and the figures in Encycl. (Pl. 364, figs. 4a, 4b) (see FIGS. 12, 13) are compatible with this species. This is confirmed by DUCLOS (1845: 27) who considers *O. fulminans* Lamarck as his variety δ ("*zébrée ou foudroyée*") of *O. maura* Lamarck, 1811 (a name formerly used for *O. nigrita*). *O. fulminans* Lamarck is thus a **colour form** of *O. nigrita* (Karsten, 1789). It is a form of *O. vidua* (Röding, 1798), another name formerly used for *O. nigrita* for ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986), *O. oliva* (L.). -a name used at the time for *O. nigrita* (Karsten, 1789)- for BURCH & BURCH (1960).

***funeralis* Lamarck, 1811** (*Ann. Mus.* 16: 317, sp. n° 26).

ORIGINAL DESCRIPTION: 26. Olive funéraire. *Oliva funeralis*. *O. Cyllindræa*, *flavida; maculis olivaceo-fuscis; spirâ brevi; ore albido*. *Oliva leucostoma*. Mus., n. 23. Encycl., pl. 365, f. 3? Martini Conch. 2, t. 45, f. 480, 481. Habite l'Océan des grandes Indes. Par ses taches, cette olive a quelques rapports avec la précédente (*O. lugubris*, remark ours). Mais ces taches sont disposées sur un fond jaune ou jaunâtre, et présentent de grandes masses d'un brun verdâtre. La spire est très-courte, mucronée; la columelle est blanche, et le fond de l'ouverture est blanchâtre, ou un peu enfumé. Longueur, environ 35 millimètres.

DISCUSSION. LAMARCK (1822: 427, sp. n° 26) does not give further information and does not mention anymore *O. leucostoma* Lamarck, 1811 (q.v.). Martini's figures 480 and 481 (MARTINI, 1769) have both been previously used for establishing both *O. variegata* (Röding, 1798), a nomen nudum, and *O. sepultura-principis* (Röding, 1798), another nomen nudum (see TURSCH & al., 1994). The figure in Encycl. (Pl. 365, fig. 3), referred to with a question mark (see FIG. 14) does not help, as it has been used by LAMARCK himself for another taxon, *O. maura* var. δ Lamarck, 1811 (q.v.), a junior synonym of *O. nigrita* (Karsten, 1789). DUCLOS (1840: 27) considers *O. fulminans* Lamarck as his variety 5 ("*ponctuée avec trois fascies*") of *O. maura* (now *O. nigrita*). The meaning of *O. fulminans* Lamarck, of which *O. leucostoma* Lamarck (q.v.) is necessarily an objective

synonym, is not clear, as the described characters are often found in varieties of *O. nigrita*. It is wiser to consider it as a **nomen dubium**. It is also a doubtful species for BURCH & BURCH (1967). It is a valid species for ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

O. funebris ; Tryon (not Lamarck, 1811), 1883 is *O. dactyliola* Duclos (BURCH & BURCH, 1960) according to WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***fusiformis* Lamarck, 1811** (*Ann. Mus.* 16: 318, sp. n° 30).

ORIGINAL DESCRIPTION: 30. Olive fusiforme. *Oliva fusiformis*. *O. Ventricosa, utrinque attenuata, alba; lineis fulvis, undatim flexuosis; spirâ acutâ*. Mus., n.35. Encycl., pl. 367, f. 1. Seba, Mus., 111, t. 53, fig. R. Martini, Conch. 2, t. 51, f. 562 ? Habite ... Cette olive paroît avoir des rapports avec l'olive du Pérou, n 28 ; mais elle en est très-distincte par sa spire élevée et pointue. Sur un fond de blanc de lait très-brillant, elle est ornée de lignes rousses ondées ou en zigzag, qui lui donnent un aspect agréable. On ne peut confondre cette espèce avec aucune de celles qui sont connues. Longueur, 48 millimètres.

DISCUSSION. The description refers to figures in Encycl. (Pl. 367, figs. 1a, 1b) (see Figs. 15, 16) and to SEBA (1734-65: fig. R), both clearly depicting *O. fulgurator* (Röding, 1798). The description and illustrations of *O. fusiformis* Lamarck in DUCLOS 1845 (p.26, Pl. 17, figs. 12-16 and Pl. 36, figs. 15, 16) also clearly refer to *O. fulgurator* (Röding, 1798). If it were not for the question mark following Lamarck's reference to Martini's figure 562, which was previously used for establishing *O. fulgurator* (Röding, 1798) (see TURSCH & al., 1994), *O. fusiformis* Lamarck would be an objective junior synonym of *O. fulgurator* (Röding, 1798). It is in all cases a **subjective junior synonym** of that species. This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

"*O. gibbosa* Lamarck" (auct.).

Misquotation. This is not in Lamarck, is not an *Oliva*, but refers to *Olivancillaria gibbosa* (Born, 1778) (Mus. Caes. Vind.: 202). This is *O. bulbosa* (Röding, 1798) for BURCH & BURCH, (1960).

***glandiformis* Lamarck, 1811** (*Ann. Mus.* 16: 317, sp. n° 27).

ORIGINAL DESCRIPTION: 27. Olive glandiforme. *Oliva glandiformis*. *O. Ovato-cylindracea, maculis exiguis fusco-rubiginosis tessellata; spirâ retusâ; ore alo*. Mus., n. 20. Mon Cabinet. β. Var. rougeâtre, ornée de lignes purpurines en zigzag. Girol. Adans. Seneg., pl 4, f. 6. Habite ... probablement les mers de l'Amérique méridionale. Cette olive ressemble assez, par la forme et la taille, à un gros gland; elle est ovale cylindracée, un peu bombée, et a sa spire très-courte, rétuse, un peu mucronée. Elle est finement marquetée de rouge-brun ou de couleur de rouille sur un fond blanchâtre; quelquefois les mailles de son réseau forment des ondes en zigzags. Cette coquille est peu commune; sa longueur est de 39 millimètres. La variété β est moins ventrue, et un peu plus petite; elle se trouve au Sénégal; on pourroit la distinguer.

DISCUSSION. No further information is given in LAMARCK (1822: 427, sp. n° 27). This taxon is not mentioned in DUCLOS and, being impossible to identify is a **nomen dubium**. This is in agreement with BURCH & BURCH (1960), BURCH & BURCH (1967), WAGNER & ABBOTT (1978).

***granitella* Lamarck, 1811** (*Ann. Mus.* 16: 314, sp. n° 18).

ORIGINAL DESCRIPTION: 18. Olive granitelle. *Oliva granitella*. *O. Castaneo-fulva, maculis albis trigonis minimis et creberrimis picta; ore albo*. Mon Cabinet. β. Var. ondée, et moins tachetée. Habite ... Cette olive devient assez grande, et semble, par ses rapports, tenir le milieu entre l'espèce précédente et celle qui suit (*flammulata* and *araneosa*, remark ours). Elle est cylindracée, d'un marron roussâtre, et ornée d'une multitude de très-petites taches blanches et trigones. Elle est blanche à son ouverture. La longueur des plus grands individus est de 64 millimètres. LAMARCK (1822: 424, sp. n° 18) adds to the Latin description: "*spirâ brevissimâ, mucronatâ*".

DISCUSSION. This species is not identifiable from the description. According to DUCLOS (1845: 18) it is *O. textilina* Lamarck (which is compatible with the original description). *O. textilina* Lamarck (q.v.) being a objective junior synonym of *O. sericea* (Röding, 1798), it follows that *O. granitella* Lamarck is a **subjective junior synonym** of *O. sericea* (Röding, 1798). This is in agreement with BURCH & BURCH (1960), BURCH & BURCH (1967), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***guttata* Lamarck, 1811** (*Ann. Mus.* 16: 313, sp. n° 14).

DISCUSSION. This case has already been studied in detail in TURSCH, GERMAIN & GREIFENEDER (1986) and it was concluded that it is a subspecies (possibly local form) of *O. amethystina* (Röding, 1798). This is in agreement with the description of DUCLOS (1845: 19). In any case, the name is preoccupied by *guttata* Fischer, 1807, itself a junior synonym of *O. olivacea* Karsten, 1789 (see TURSCH & al., 1994). *O. guttata* Lamarck is a **junior homonym** of *O. guttata* Fischer, 1807. According to BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986), *O. guttata* Lamarck is *O. annulata* (Gmelin, 1791) (a *nomen dubium*, see TURSCH, GERMAIN & GREIFENEDER, 1986).

***harpularia* Lamarck, 1811** (*Ann. Mus.* 16: 319, sp. n° 34).

ORIGINAL DESCRIPTION: 34. Olive harpulaire. *Oliva harpularia*. *O. Cyclindracea, fulva aut spadicea, bifasciata; costellis longitudinalibus obsoletis; maculis trigonis exiguis*. Mon Cabinet. Encycl. pl. 365, fig. 4 ? *La même dépouillée (*decorticata*) offrant des lignes longitudinales d'un rouge-brun, et un peu en zigzag. Mon Cabinet. Chemn. Conch. 10, t. 147, f. 1376 et 1377. Habite ... C'est avec l'olive réticulaire, n. 15, que cette espèce paroît avoir quelques rapports; mais elle est très-distinguée par ses couleurs, et par les espèces de petites côtes longitudinales qu'on aperçoit sans les sentir. Elle est d'un roux brun ou d'un brun rougeâtre, ornée de deux bandes transversales, et de très-petites taches trigones et blanchâtres. La spire est un peu pointue. Longueur, 46 millimètres.

DISCUSSION. There is no further information in LAMARCK (1822: 429, sp. n° 34). The figure in Encycl. (Pl. 365, fig. 4), cited with a question mark, is used by LAMARCK himself for establishing *O. tricolor* Lamarck. Figures 1376 and 1377 of CHEMNITZ (1786) could represent many large American olives. DUCLOS (1845: 16) places *O. harpularia* Lamarck, 1811 in the synonymy of *O. reticularis* Lamarck, 1811. It is obviously best to consider this taxon (probably a very worn specimen of a large American olive) as a **nomen dubium**. This is *O. spicata* (Röding, 1798) for BURCH & BURCH (1960) and WAGNER & ABBOTT (1978), a colour form of *O. venulata* Lamarck, 1811 for PETUCH & SARGENT (1986).

***hepatica* Lamarck, 1811** (*Ann. Mus.* 16: 320., sp. n° 35).

ORIGINAL DESCRIPTION: 35. Olive hépatique. *Oliva hepatica*. *O. Cyclindracea, elongata, subcastanea; spirâ convexo-acutâ, variegatâ; ore albo*. Mus., n. 29. Mon Cabinet. Habite ... Cette olive est cylindracée, allongée, d'un brun marron, presque sans aucune tache. La spire est médiocre, convexe, un peu pointue, panachée de blanc et de marron. La columelle est striée transversalement dans toute sa longueur. Cette coquille est longue de 53 millimètres.

In LAMARCK (1822: 430, sp. n° 35) one finds the Latin description: "*O. testâ cylindraceâ, elongatâ, castaneo-fuscescente, obscurè zonatâ; spirâ convexo-acutâ, variegatâ; ore albo*". The French descriptions is nearly the same, but ends with: "Columelle striée transversalement dans toute sa longueur, et d'un beau blanc, ainsi que le bord droit".

DISCUSSION. According to DUCLOS (1845: 17) this is *O. tremulina* Lamarck, 1811. The description could apply to the dark colour forms of *O. tremulina* Lamarck, 1811, *O. concinna* Marrat, 1870 or even *O. ornata* Marrat, 1867. We therefore prefer to consider *O. hepatica* Lamarck, 1811 a **nomen dubium**. This is *O. tremulina* Lamarck for BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***inflata* Lamarck, 1811** (*Ann. Mus.* 16: 319, sp. n° 32).

ORIGINAL DESCRIPTION: 32. Olive enflée. *Oliva inflata*. *O. Ovata, ventricosa, albido lutescens, fusco-punctata; spirâ brevi mucronatâ; columellâ callis tuberculatâ*. Mus., n. 53. Encycl., pl. 364, f. 5. Habite ... Cette olive ressemble assez à la précédente (*O. undata* Lamarck, 1811, remark ours) par les callosités tuberculeuses de sa columelle, et même par sa forme ovale un peu ventrue; mais elle est colorée différemment, et sa spire, quoique très-courte, est plus éminemment mucronée. Sur un fond d'un blanc jaunâtre, elle présente un multitude de points bruns, nébuleux d'un côté, et épars. Longueur, 39 millimètres.

DISCUSSION. From the description, the figures in Encycl. (Pl. 364, figs. 5a, 5b) (see FIGS. 17, 18) and the account of DUCLOS (1845: 26) there can be no doubt that *O. inflata* Lamarck is a **subjective junior synonym** of *O. bulbosa* (Röding, 1798). This is in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***irisans* Lamarck, 1811** (*Ann. Mus.* 16: 312, sp. n° 10).

ORIGINAL DESCRIPTION: 10. Olive irisante. *Oliva irisans*. *O. Cylindracea, bifasciata, lineis flexuosis fusco luteis subreticulata; spirâ acuminatâ; columellâ basi subcarneâ*. Mus. n. 9. Mon Cabinet. Martini Conch. 2, t. 561. An Chemn. Conch. 10, t. 147, f. 1371-1372 ? Habite ... Cette olive est élégamment ornée de lignes en zigzag, serrées, brunes et bordées d'un jaune orangé, disposées sur un fond blanchâtre. Deux zones réticulées et un peu rembrunies la traversent. L'ouverture est blanche, mais la base de la columelle est teinte de couleur chair. Longueur, 5 centimètres.

DISCUSSION. There is no further information in LAMARCK (1822: 422, sp. n° 10). The figure 561 of Martini is unrecognizable. The figures of CHEMNITZ (1786: figs. 1371-2) (cited with a question mark) most probably depicts the zigzag form of *O. reticulata* (Röding, 1798). *O. irisans* Lamarck, 1811 can hardly been recognized by the original description and has been a most controversial species. It is a nomen nudum for BURCH & BURCH (1960), indeterminate for WAGNER & ABBOTT (1978), valid for PETUCH & SARGENT (1986). Much of the controversy might be explained by the comment of DUCLOS (1845: 30): "*Coquille admirable, dont Lamarck ne possédait qu'un mauvais exemplaire et qu'il a décrite par inspiration ...*". The description of DUCLOS (1840: 30) and his excellent figures (1840, Pl. 28, figs 7-12) leave no doubt about the identity of the species. This is a **valid** species, of which figures 7, 8 of DUCLOS (see FIGS. 19, 20) show a good example.

***leucophaea* Lamarck, 1811** (*Ann. Mus.* 16: 314, sp. n° 15).

DISCUSSION. LAMARCK himself (1811) says in the description: "Je présume que cette olive n'est qu'une variété de la précédente" (*O. guttata* Lamarck, 1811, remark ours). DUCLOS (1845: 19) considers it as a variety of *O. guttata* (q.v.). This case has already been studied in detail by TURSCH, GERMAIN & GREIFENEDER (1986), who concluded that it is a **objective junior synonym** of *O. annulata* (Gmelin, 1791), itself a nomen dubium encompassing the two distinct species *O. amethystina* (Röding, 1798) and *O. mantichora* Duclos, 1840. *O. leucophaea* Lamarck is *O. annulata* for BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***leucostoma* Lamarck, 1811** (*Ann. Mus.* 16: 317, sp. n° 26, under *funnebralis*).

DISCUSSION. This word cannot be taken as an adjective. In all of Lamarck's descriptions, the first adjective following the abbreviation "O." always begins with a capital letter. Furthermore, it is quite unlikely that Lamarck would have used a Greek compound adjective in a Latin description. If not an adjective, then *leucostoma* has to be a taxon name. Appearing in the same description, *O. leucostoma* can only be interpreted as an **objective synonym** of *O. funnebralis* Lamarck, 1811.

***litterata* Lamarck, 1811** (*Ann. Mus.* 16: 315, sp. n° 20).

DISCUSSION. In any case, this name (formerly used for *O. sayana* Ravenel, 1834) is a **junior homonym** of *O. litterata* (Röding, 1798), a nomen dubium (see TURSCH & al., 1994).

***lugubris* Lamarck, 1811** (*Ann. Mus.* 16: 317, sp. n° 25).

ORIGINAL DESCRIPTION: 25. Olive de deuil. *Oliva lugubris*. *O. Cylindracea, albida; maculis fuscis diversiformibus; spirâ acuminatâ; ore violaceo*. Mus., n. 7. Mon Cabinet. Habite l'Océan des grandes Indes. Il me paroît que cette espèce n'a pas encore été figurée, et cependant elle est assez remarquable, et n'est point rare dans les collections. C'est une coquille cylindracée, à spire un peu élevée et pointue. Sur un fond blanc ou blanchâtre, elle offre quantité de taches brunes, un peu olivâtres, les unes par masses, les autres par traits en zigzags, et qui lui donnent un aspect rembruni. Son ouverture présente un fond violet, quoique la columelle soit blanchâtre. Longueur, 42 millimètres.

In LAMARCK (1822: 426, sp. n° 25) one finds: *O. testâ cylindraceâ, albidâ; maculis fuscis cæruleo-nebulatis diversiformibus; spirâ exsertiusculâ, acuminatâ; ore violaceo*.

DISCUSSION. DUCLOS (1845: 15) considers this a valid species. His illustrations (Pl. 11, figs. 5, 6) (see FIGS. 21, 22) agree with Lamarck's description and unmistakably depict the dark form of *O. caerulea* (Röding, 1798). *O. lugubris* Lamarck, 1811 is a **subjective junior synonym** (colour form) of *O. caerulea* (Röding, 1798). This is in agreement with BURCH & BURCH (1967), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986) and (as *O. episcopalis* Lamarck, q.v.) with BURCH & BURCH (1960) and ZEIGLER & PORRECA (1969).

maura Lamarck, 1811 (*Ann. Mus.* 16: 311, sp. n° 7).

DISCUSSION. The identity of this taxon is clear from the many references to illustrations. With two exceptions (*Chemn. Conch.* 10, t. 147, fig. 1382, depicting a dark, unrecognizable olive and *Encycl.*, 365, fig. 3, used elsewhere by Lamarck for *funeralis*), all the cited figures represent *O. nigrata* (Karsten, 1789). The variability of the species is attested by a long French description, mainly devoted to colour pattern variations with such delightful names as "la mauresque ou la datte noire", "la veuve éthiopienne", "la datte moirée", "la datte cerclée". The identity of *O. maura* is further demonstrated by the description of Duclos (1840: 27) and his excellent illustrations of many forms of this shell. Lamarck's reference to Martini's figures 472 and 473 (in MARTINI & CHEMNITZ, 1769-95) previously utilised for establishing *O. nigrata* (Karsten, 1789) (see TURSCH & al., 1994) makes *O. maura* Lamarck an **objective junior synonym** of *O. nigrata* (Karsten, 1789). *O. maura* Lamarck is *O. oliva* (L., 1758), a name utilised at the time for *O. nigrata* (Karsten, 1789), for BURCH & BURCH (1960), and *O. vidua* (Röding, 1798), a name formerly used for *O. nigrata* (Karsten, 1789) for ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

mustelina Lamarck, 1811 (*Ann. Mus.* 16: 316, sp. n° 24).

ORIGINAL DESCRIPTION: 24. Olive musteline. *Oliva mustelina*. *O. Cylindrica*, *albida*; *lineis fusco-rufis flexuosis longitudinalibus*; *spirâ brevi*; *ore violaceo*. Mon Cabinet. List. Conch., t. 20, f. 731. An Martini, Conch. 2, t. 48, f. 515 et 516. Habite ... probablement l'Océan américain. Cette olive paroît avoir des rapports avec la variété de l'olive glandiforme; mais son ouverture d'un beau violet, et sa forme plus cylindrique, ainsi que sa coloration, l'en distinguent. Sa longueur est de 23 à 24 millimètres.

DISCUSSION. Lamarck's description is quite vague, the figure 731 of LISTER (1682-95) is hardly recognizable, and the figures 515 and 516 of MARTINI (in MARTINI & CHEMNITZ, 1769-95) have already been cited for *O. coerulea* Link, 1807, an incorrect spelling for *O. caerulea* (Röding, 1798) (see TURSCH & al., 1994). *O. mustelina* is said close to *O. glandiformis* Lamarck, 1811 (*q.v.*), which is a **nomen dubium** and this does not help. The violet aperture and the cylindrical body are the main indications. Fortunately DUCLOS (1845: 24),

gives a good description and unequivocally depicts (Pl. 22, figs. 1, 2) (see FIGS. 23, 24) the well-known species. Interestingly, DUCLOS mentions that LAMARCK possessed only one immature specimen of this taxon, not displaying the adult characteristics. *O. mustelina* is **valid**, in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

obtusaria Lamarck, 1822 (*Hist. Nat.* 7: 436, sp. n° 53).

ORIGINAL DESCRIPTION: 53. Olive obtusaire. *Oliva obtusaria*. *O. testâ majusculâ, cylindraceâ, pallidâ carneâ, maculis rufocastaneis irregularibus crebris undatâ, subbifasciatâ; spirâ brevi, obtusâ, longitudinaliter fuscolineatâ; ore albido*. Habite Mon Cabinet. Grande et belle olive, remarquable par sa spire courte, obtuse et rayée de brun. Columelle striée inférieurement, non calleuse. Longueur, 2 pouces 11 lignes.

DISCUSSION. From the description of Lamarck, this taxon is impossible to identify. DUCLOS (1845: 17) places it in the synonymy of *O. tremulina* Lamarck, 1811. It is better to consider it as a **nomen dubium**, in agreement with BURCH & BURCH (1967). This is *O. tremulina* Lamarck, 1811 for BURCH & BURCH (1960), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

oriola Lamarck, 1811 (*Ann. Mus.* 16: 321, sp. n° 41).

ORIGINAL DESCRIPTION: Olive oriole. *Oliva oriola*. *O. Cylindracea, angusta, castanea; spirâ brevi acutâ; ore albo*. Mus., n. 43. *Encycl.*, pl. 366, f. 3. Martini, Conch. 2, t. 49, f. 537 et 538. β . Variété jaune. *Encycl.*, pl. 367, f. 2. Martini, Conch. 2, t. 49, f. 534 à 536. Habite ... probablement l'Océan indien. Les rapports de cette olive avec la précédente [*O. ispidula*; Lamarck (not Linnaeus, 1758), 1811, remark ours] peuvent faire croire qu'elle n'en est qu'une variété: cependant, outre qu'elle est toujours un peu plus petite, elle n'est point mouchetée à l'extérieur, et son ouverture ne présente qu'une couleur blanche, rarement pâle ou altérée.

DISCUSSION. The figures 534, 535, 536, 537 and 538 of MARTINI (in MARTINI & CHEMNITZ, 1769-95) are all compatible with varieties of *oliva* (L., 1758). The figure 535 of Martini had been used for establishing *O. ispidula* var α of Röding, 1798 (a **nomen dubium**, see TURSCH & al., 1994). Figure 537 was used for *O. umbrosa* (Röding, 1798) (also a **nomen dubium**, see TURSCH & al., 1994).

The figures in *Encycl.* (Pl. 366, figs. 3a, 3b) (see FIGS. 25, 26) are also compatible with the black form of *O. oliva* (L., 1758). DUCLOS (1845: 15) considers this a valid species. His illustrations on Pl. 11, figs 19, 20 are compatible with *O. oliva* (L., 1758) whereas those of Pl. 11, figs. 1, 2 probably depict another species (with a reticulated pattern and flaring aperture). The name *O. oriola* Lamarck, 1811 is usually thought to be a dark form of *O. oliva* (L., 1758), but this is not consistent with the existence of a yellow variety β , described by Lamarck. It is better to consider *O. oriola* Lamarck, 1811 as a **subjective junior synonym** of *O. oliva* (L., 1758). *O. oriola* Lamarck, 1811 is *O. ispidula* for BURCH & BURCH (1960), a form of *O. oliva* (L., 1758) for BURCH & BURCH (1967), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***peruviana* Lamarck, 1811** (*Ann. Mus.* 16: 317, sp. n° 28).

ORIGINAL DESCRIPTION: 28. Olive du Pérou. *Oliva peruviana*. *O. Ovata, subventricosa, albidâ; punctis fusco-rubris, acervatim undatis; spirâ brevi mucronata; ore albo*. Mus., n. 32. *Encycl.*, pl. 367, f. 4. β . La même plus colorée, plus rembrunie. *O. Dombeyana*. Mus., n. 34. Habite les côtes du Pérou, d'où elle fut rapportée par Dombey. Cette olive constitue une espèce distincte, par sa forme particulière et ses couleurs. Elle est ovale, bombée, et offre, sur un fond blanchâtre, quantité de petites taches punctiformes, rouges ou d'un rouge-brun, formant tantôt de petits amoncellemens, tantôt des linéoles en zigzag. La spire est fort petite, courte, mucronée. Longueur 42 à 45 millimètres.

In LAMARCK (1822: 427, sp. 28) one finds in addition: [b] *Eadem intensius colorata*.

DISCUSSION. In the original description, the only thing in favour of the current interpretation is the locality, Peru. The figures in *Encycl.* (Pl. 367, figs. 4a, 4b) (see FIGS. 27, 28) are not convincing at all. What are the bulge on the last spire whorl, the numerous, fine columellar plications very carefully drawn on fig. 4a (see FIG. 27), the double row of little points on the suprafasciolar zone? These features are rarely (if ever seen) in the shell we today call *O. peruviana* Lamarck, 1811. The described colour pattern is also not very characteristic. DUCLOS (1845: 26) insists on the great variability of this taxon and depicts (Pl. 16, figs. 9-16) varieties that unmistakably correspond to the current use of *O. peruviana*. A good example is given in his Pl. 16, figs. 9-10

(see FIGS. 29, 30). This allows us to save this familiar taxon as **valid**, in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***pica* Lamarck, 1811** (*Ann. Mus.* 16: 310, sp. n° 4).

ORIGINAL DESCRIPTION: 4. Olive pie. *Oliva pica*. *O. Fusca, albo maculata: maculis pluribus subtrigonis; ore candido*. Mus., n. 5. Mon Cabinet. Habite les mers de la Nouvelle-Hollande. Sur une couleur brune ou d'un fauve très-rebruni, cette olive présente des taches d'un beau blanc, irrégulières, et dont plusieurs sont trigones ou deltoïdes. La couleur blanche néanmoins est celle du fond de la coquille, quoique le brun soit dominant sur sa robe. Cette olive est grande, longue de 8 centimètres, cylindracée, un peu atténuée vers la spire. Son ouverture est d'une grande blancheur.

DISCUSSION. There is no further information in LAMARCK (1822: 419, sp. n° 4). The described characters could apply equally well to several species, such as *O. concinna* Marrat, 1870 and *O. tremulina* Lamarck, 1811. There is no reference illustration. DUCLOS (1845: 18) considers this as a synonym of *O. textilina* Lamarck, an older name for *O. sericea* (Röding, 1798). This should be considered as a **nomen dubium**. This taxon is valid for PETUCH & SARGENT (1986), is *O. tremulina* for BURCH & BURCH (1960), maybe a form of *O. tremulina* Lamarck, 1811. for ZEIGLER & PORRECA (1969) and ? *O. concinna* Marrat, 1870 for WAGNER & ABBOTT (1978).

***reticularis* Lamarck, 1811** (*Ann. Mus.* 16: 314, sp. n° 16).

ORIGINAL DESCRIPTION: 16. Olive réticulaire. *Oliva reticularis*. *O. Cylindracea, alba, subbifasciata; lineis fulvis, subpunctatis flexuoso-angulatis; spirâ acutâ*. Mus., n. 12. *Encycl.*, pl. 361, f. 1. Martini, *Conch.* 2, t. 51, f. 561. Habite ... Sur un fond blanc, cette olive offre quantité de lignes en zigzags, rousses, subponctuées. Dans les espaces qu'embrassent deux bandes transverses, ces lignes, plus épaissies et plus colorées, imitent en quelque sorte des caractères d'écriture. Cette olive est un peu bombée, a une spire pointue, et ne présente qu'une couleur blanche à son ouverture. Sa longueur est d'environ 45 millimètres. Le bord supérieur du dernier tour est comme dentelé par des taches d'un brun violet, composées de lignes repliées en faisceau.

DISCUSSION. Martini's fig. 561 (in MARTINI & CHEMNITZ, 1769-95) is unrecognizable. The

figures in Encycl. (Pl. 361, figs. 1a, 1b) (see FIGS. 31, 32) are very clear and depict the taxon universally known under *O. reticularis*. One should, however, note that the very concave lip is not at all a common feature. The last line of the French description is of good diagnostical value. DUCLOS (1845: 16) gives a long list of localities (mostly erroneous), but insists on the great variability of this taxon, evidenced by his illustrations (Pl. 10, figs. 1-12). This name is **valid**, in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

There remains a problem of species delimitation because it is possible that *O. reticularis* Lamarck intergrades with *O. fulgurator* (Röding, 1798). This complex biological problem cannot be solved in the context of this paper and requires separate treatment.

***sanguinolenta* Lamarck, 1811** (*Ann. Mus.* 16: 316, sp. n° 23).

DISCUSSION. The identity of this species is clear from the original description, the cited figures and mainly from the description of DUCLOS (1845: 24) and his illustrations (Pl. 22, figs. 14-16) accurately depicting the species. Lamarck's citation of Martini's figure 512, previously utilised for establishing *O. reticulata* (Röding, 1798) (see TURSCH & *al.*, 1994) makes *O. sanguinolenta* Lamarck an **objective junior synonym** of *O. reticulata* (Röding, 1798). This is in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***scripta* Lamarck, 1811** (*Ann. Mus.* 16: 315, sp. n° 21).

ORIGINAL DESCRIPTION: 21. Olive écrite. *Oliva scripta*. *O. Cyllindracea, reticulo tenui fulvo colorata; fasciis characterum fuscorum obsoletis; spirâ brevi; ore coerulescente*. Mus., n. 27. Encycl., pl. 362, f. 4. β. La même ? à spire plus élevée. Habite... Cette olive n'est point rare dans les collections, et cependant je n'en connois de figure que dans l'Encyclopédie. Elle est plus ou moins foncée en couleur selon que le réseau fin et d'un fauve brun qui la couvre est plus ou moins apparent. Ses deux zones transverses, composées de traits bruns, presque en forme de lettres, sont aussi plus ou moins exprimées selon les individus. Les plus grands n'ont que 47 millimètres. In LAMARCK (1822: 425, sp. n° 21), the form β is replaced by : [b] *Var. spirâ elatiore*. Mon cabinet.

DISCUSSION. The figures in Encycl. (Pl. 362, figs. 4a, 4b) (see FIGS. 33, 34) are quite clear but not completely unambiguous. The description of DUCLOS (1845: 16) and his fine illustrations (Pl. 11, figs. 13-14) leave no doubt as to the identity of this Western Atlantic taxon. This name is **valid**. This is in agreement with PETUCH & SARGENT (1986). The name *O. scripta* Lamarck, 1811 was applied by ZEIGLER & PORRECA (1969) and WAGNER & ABBOTT (1978) to another species with an Indo-Pacific distribution. This interpretation is not compatible with the data from DUCLOS (1845).

***senegalensis* Lamarck, 1811** (*Ann. Mus.* 16: 318, sp. n° 29).

ORIGINAL DESCRIPTION: 29. Olive du Sénégal. *Oliva Senegalensis*. *O. Ovata, ventricosa, albida; lineis rubris longitudinalibus, undatim flexuosis; spirâ breviusculâ*. Mus., n. 33. Encycl., pl. 364, f. 3. Favanne, Conch., pl. 19, fig. R. D'Argenv., Conch., t. 12, fig. S. Habite les côtes du Sénégal. Cette olive, qu'on nomme vulg. la *papeline*, est fort remarquable par ses lignes pourpres ou d'un rouge-brun, disposées longitudinalement et un peu en zigzag, sur le fond blanchâtre de la coquille. Elle est ovale, bombée, et terminée supérieurement par une spire en cône court et pointu. Sa longueur est de 38 millimètres.

In LAMARCK (1822: 428, sp. n° 29), the reference to d' ARGENVILLE (1742) becomes: pl. 13., fig. S.

DISCUSSION. The figures of FAVANNE (1780), d' ARGENVILLE and that in Encycl. (Pl. 364, fig. 3) (see FIG. 35) unmistakably depict *O. peruviana* Lamarck, 1811. Indeed, DUCLOS (1845: 26) considers *O. senegalensis* Lamarck is his variety "b" of that species. *O. senegalensis* Lamarck, 1811 is a **subjective junior synonym** of *O. peruviana* Lamarck, 1811. This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***sepulchralis* Lamarck, 1810** (auct.)

This is a **misspelling** for *sepulchralis* in BURCH & BURCH (1967: 510), that has been often used by subsequent authors. It is a form of *O. vidua* (Röding, 1798) [this is *O. nigrita* (Karsten, 1789) for BURCH & BURCH (1967)], WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

sepulchralis Lamarck, 1811 (*Ann. Mus.* 16: 311, sp. n° 8).

ORIGINAL DESCRIPTION: 8. Olive sépulturale. *Oliva sepulchralis*. *O. Cylindracea, apice retusa, viridescens; fasciis duabus nigris interruptis; ore candido*. Mus., n. 7. Encycl., pl. 365, f. 1. Gualt. ind., t. 24, fig. E. β. Var. à taches longitudinales. Habite... probablement l'Océan des grandes Indes. Elle a évidemment des rapports avec la précédente (*O. maura*, remark ours), et cependant elle en est constamment distincte. Sur un fond verdâtre, ou d'un cendré verdâtre, cette olive présente deux rangées transverses de taches noires et irrégulières, disposées sur deux zones pâles peu apparentes. Dans la variété β, outre les deux rangées transverses de taches noires, on voit plusieurs bandes noires, longitudinales et un peu irrégulières qui occupent presque toute la longueur de la coquille. Sa taille est à peu près la même que celle de l'olive maure. Quoique très-blanche à son ouverture, la base de sa columelle offre une légère teinte couleur de chair.

In LAMARCK (1822: 421, sp. n° 8) β, becomes: [b] Var. *testâ longitudinaliter nigro-maculatâ*. Mon cabinet. Habite.... l'Océan des grandes Indes ? Mon cabinet. Sa spire est extrêmement courte, rétuse. Longueur, 2 pouces 3 lignes.

DISCUSSION. The cited figure E β of GUALTIERI (1742) is not recognizable. The figure in Encycl. (Pl. 365, fig. 1) (see FIG. 36) clearly depicts *O. nigrita* (Karsten, 1789), (see TURSCH & al., 1994). This is hardly a distinct colour form. DUCLOS (1845: 27) considers *O. sepulchralis* Lamarck, 1811 as the variety 2 "ponctuée avec deux fascies" of *O. maura* Lamarck, a name formerly used for *O. nigrita* (Karsten, 1789). All evidence indicates that *O. sepulchralis* is a **subjective junior synonym** of *O. nigrita* (Karsten, 1789). This is in agreement with ZEIGLER & PORRECA (1969), considering *O. sepulchralis* Lamarck as a form of *O. vidua* (Röding, 1798), a name formerly used for *O. nigrita* (Karsten, 1789), and BURCH & BURCH (1960) considering it as a variety of *O. oliva* (L., 1758), another name formerly used for *O. nigrita* (Karsten, 1789).

tessellata Lamarck, 1811 (*Ann. Mus.* 16: 320, sp. n° 38).

DISCUSSION. The identity of this species is clear from the original description, the cited figures, the good illustrations in Encycl. (Pl. 368, figs. 1a, 1b) and the comments of DUCLOS (1845: 29). Unfortunately, Lamarck's citation of Martini's figure 493 and 494 (in MARTINI & CHEMNITZ, 1769-95) previously

utilised for establishing *O. olivacea* (Karsten, 1789) (see TURSCH & al., 1994) makes the familiar *O. tessellata* Lamarck an **objective junior synonym** of *O. olivacea* (Karsten, 1789). *O. tessellata* Lamarck is a valid species for ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

textilina Lamarck, 1811 (*Ann. Mus.* 16: 309, sp. n° 2).

DISCUSSION. The identity of this species is clear from the original description, the cited figures and the good illustrations in Encycl. (Pl. 362, figs. 5a, 5b). Lamarck's citation of Martini's figures 559 and 561 (in MARTINI & CHEMNITZ, 1769-95) (the latter cited only in LAMARCK 1822: 418, sp. n° 2), previously utilised for establishing *O. sericea* (Röding, 1798) (see TURSCH & al., 1994) makes *O. textilina* Lamarck an **objective junior synonym** of *O. sericea* (Röding, 1798). This is in agreement with WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986). The species is valid for ZEIGLER & PORRECA (1969).

tigrina Lamarck, 1811 (*Ann. Mus.* 16: 322, sp. n° 44).

ORIGINAL DESCRIPTION: 44. Olive tigrine. *Oliva tigrina*. *O. Cylindraceo-ventricosa, albida; punctis lividis lineisque fuscis flexuoso-angulatis; spirâ brevi*. Mus., n. 17. Gualt. ind., t. 23, fig. pp? Martini, Conch. 2, t. 45, f. 475. Habite... Les rapports de cette olive la rapprochent de l'espèce n. 12 (*O. episcopalis* Lamarck, 1811, remark ours) et de celle n. 13 (*O. venulata* Lamarck, 1811, remark ours); mais elle en est très-distincte. Elle est cylindracée, ventrue ou bombée, à spire très-courte, mucronée, et à bords des sutures non flambés. Elle offre, sur un fond blanchâtre, des points cendrés, livides, rangés en lignes fléchies, et en outre des lignes brunes en zig-zags, formant des ondes longitudinales. Ouverture blanche. Longueur, 5 centimètres.

DISCUSSION. The cited illustration of Martini (in MARTINI & CHEMNITZ, 1769-95) is compatible with the present, unanimous concept of *O. tigrina*. The description of DUCLOS (1845: 25) and his excellent illustrations (Pl. 23, figs. 7-12, 17-19 and Pl. 36, figs. 13, 14) leave no doubt. His figures Pl. 23, figs. 7-8 (see FIGS. 37, 38) are a good example. This taxon is **valid** in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

tremulina Lamarck, 1811 (*Ann. Mus.* 16: 310, sp. n° 5).

ORIGINAL DESCRIPTION: 5. Olive tremuline. *Oliva tremulina*. *O. Albida; lineis longitudinalibus, fusco violaceis, flexuosis, remotiusculis; fasciis binis, fuscis; ore pallido*. Mus., n. 3. Mon Cabinet. List. Conch., t. 727, f. 14. Habite... Grande et belle olive, qui paroît avoir des rapports avec l'espèce n. 3 (*O. erythrostoma*, remark ours), mais qui, même dans tous les âges, s'en distingue par ses lignes longitudinales plus séparées, jamais nuées de jaune, et par la couleur pâle de son ouverture. Elle a 77 millimètres de longueur. La bande oblique de sa base est tachetée de brun.

In LAMARCK (1822: 420, n° 5), the French description is very similar but the Latin description becomes: "*O. testâ albedo-lutescente; lineis violaceo-fuscis longitudinalibus flexuosis remotiusculis; fasciis duabus fuscis; ore pallido*".

DISCUSSION. The cited illustration of LISTER (1682-1695) is compatible with the present concept. The description of DUCLOS (1845: 17) and his illustrations (Pl. 12, figs. 1-9) leave no doubt on the identity of the taxon. His illustrations Pl. 12, figs. 3-4 (see FIGS. 39, 40) give a good example. This name is valid but the affinities of this taxon with the closely related *O. miniacea* (Röding, 1798) remain a problem. *O. tremulina* Lamarck is probably valid for BURCH & BURCH (1967), valid for ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986). It was considered to be a form of *O. miniacea* (Röding, 1798) by JOHNSON (1928: pp. 8-9), whose arguments have not yet been objectively refuted. This complex biological problem cannot be solved in the context of this paper and requires separate treatment.

tricolor Lamarck, 1811 (*Ann. Mus.* 16: 316, sp. n° 22).

ORIGINAL DESCRIPTION: 22. Olive tricolore. *Oliva tricolor*. *O. Cylindracea, viridis, luteo alboque tessellatim maculata; spirâ brevi variegatâ*. Mus., n. 22. Encycl., pl. 365, f. 4. An List. Conch., t. 739, f. 26 ? Gualt. ind., t. 4, fig. 1, L. N. Martini, Conch. 2, t. 48, f. 511. Habite l'Océan des grandes Indes, les côtes de Timor, de Java, etc. Olive de moyenne taille, très-commune dans les collections, et néanmoins fort jolie par les couleurs dont elle est ornée. Sur un fond blanc, presque entièrement caché par les autres couleurs, elle offre deux ou trois zones transverses, verdâtres, et dans leurs intervalles, quantité de petites taches nuées de vert, de jaune et de blanc. Son ouverture est blanche ou d'un blanc bleuâtre; mais la base

de sa columelle est teinte de couleur de chair. Longueur, 44 à 45 millimètres.

DISCUSSION. The cited figures of GUALTIERI (1742) represent different shells, amongst which *O. tricolor* can hardly be recognized. The cited figures of LISTER (1682-95) and MARTINI (in MARTINI & CHEMNITZ, 1769-95) are compatible with the present, unanimous concept of the species. The figures in Encycl. (Pl. 365, figs. 4a, 4b) (see FIGS. 41, 42) are quite clear. The description of DUCLOS (1845: 25) and his excellent figures (Pl. 22, figs. 9-11) leave no doubt. This species is valid, in agreement with ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

undata Lamarck, 1811 (*Ann. Mus.* 16: 318, sp. n° 31).

DISCUSSION. The figures in Encycl. (Pl. 364, figs. 7a, 7b) unmistakably depict *O. bulbosa* (Röding, 1798). The cited illustrations of LISTER (1682-95; Pl. 740, fig. 29) and CHEMNITZ (1786; Pl. 147, fig. 1373) are also compatible with this interpretation. DUCLOS (1845: 27) considers this as the variety 3 ("avec des lignes flexueuses ou en zigzag") of *O. inflata* Lamarck (an older name for *O. bulbosa*). Lamarck's citation of Martini's figures 507 and 508, previously utilised for establishing *O. bulbosa* (Röding, 1798) (see TURSCH & al., 1994) makes *O. undata* Lamarck, 1811 an **objective junior synonym** of *O. bulbosa* (Röding, 1798). This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

undatella Lamarck, 1811 (*Ann. Mus.* 16: 326, sp. n° 55).

ORIGINAL DESCRIPTION: 55. Olive ondatelle. *Oliva undatella*. *O. Ovato-conica, albo fuscoque varia, extremitatibus fasciata; lineis undatis fuscis dorsalibus*. Mon Cabinet. Habite l'Océan pacifique, sur les côtes d'Acapulco, d'où M. Bonplan l'a rapportée. Petite olive ovale-conique, qui se rapproche de la précédente (remark ours: *O. conoidalis* Lamarck, 1811, not an *Oliva*) par ses rapports, mais dont la spire est moins élevée, la columelle différemment striée, et les caractères de coloration un peu particuliers. Longueur 12 à 13 millimètres.

In LAMARCK (1822: 438, sp. n° 58) the description becomes: "*O. testâ ovato-conicâ, fuscente; anfractuum margine superiore fasciâ luteâ angustâ, transversim fusco-lineatâ; zonâ baseos latâ luteâ, lineis fuscis pictâ; ore fusco*".

Also: "Habite l'Océan Pacifique, sur les côtes d'Acapulco. MM. de Humboldt et Bonpland."

DISCUSSION. Excepted for the locality, this familiar taxon would be difficult to recognise from the original description. It is fortunate that the description of DUCLOS (1844: 12) and his fine illustrations (Pl. 6, figs. 5-10) leave no doubt about the identity of this species. His illustrations Pl. 6, figs. 5, 6 (see FIGS. 43, 44) are good examples. This species is **valid**. This is in agreement with BURCH & BURCH (1960), ZEIGLER & PORRECA (1969), WAGNER & ABBOTT (1978) and PETUCH & SARGENT (1986).

***ustulata* Lamarck, 1811** (*Ann. Mus.* 16: 320, sp. n° 36).

ORIGINAL DESCRIPTION: 36. Olive rotie. *Oliva ustulata*. *O. Cyllindracea, fusco-fulva, lineis albidis transversis cingulata; spirâ acutâ*. Mus., n. 30. Mon Cabinet. An Chemn. Conch. 10, t. 147, f. 1378 ? Habite ... Cette olive est une espèce facilement distincte par ses cordelettes blanchâtres et transversales. Elle est cylindracée, à spire un peu élevée et pointue. Sa couleur principale varie du jaune fauve, au roux brun ou marron, et quelquefois à la couleur brune presque noire. Longueur 39 millimètres et au-delà.

DISCUSSION. The figure of CHEMNITZ (1786) (cited with a question mark) is possibly *O. reticularis* Lamarck, 1811 form *bifasciata* Küster, 1878. The identity of this shell is not clear and the name should be a **nomen dubium**. *O. ustulata* Lamarck is a synonym of *O. reticularis* Lamarck for DUCLOS (1845: 16). It is *O. spicata* (Röding, 1798) for BURCH & BURCH (1960), a form of *O. spicata* (Röding, 1798) for ZEIGLER & PORRECA (1969), possibly *O. fuscata* Marrat, 1870 for WAGNER & ABBOTT (1978), a colour form of *O. venulata* Lamarck for PETUCH & SARGENT (1986).

***venulata* Lamarck, 1811** (*Ann. Mus.* 16: 313, sp. n°13).

DISCUSSION. The figure in Encycl. (pl. 361, fig. 5) could depict any of several American taxa. In any case, Lamarck's reference to Martini's fig. 488 (in MARTINI & CHEMNITZ, 1769-95), already used for establishing *O. litterata* (Röding, 1798) makes it an **objective junior synonym** of *O. litterata* (Röding, 1798) which is itself a **nomen dubium** (TURSCH & al., 1994). This is a valid species for DUCLOS (1845: 25; Pl. 17, figs. 5, 6; Pl. 22, figs. 19, 20; Pl. 33, fig. 11, illustrating rather dissimilar shells) and for PETUCH & SARGENT (1986). It

is a form of *O. spicata* (Röding, 1798) for BURCH & BURCH (1960), ZEIGLER & PORRECA (1969) and WAGNER & ABBOTT (1978).

"*vermiculata* Lamarck" (auct.).

Misquotation. This is cited by GRAY (1758: 44) as a synonym of his sp. 12, *Strephona reticularis* (Lamarck, 1811). *O. vermiculata* Lamarck does not exist.

***zeilanica* Lamarck, 1822** (*Hist. Nat.* 7: 436, sp. n° 54).

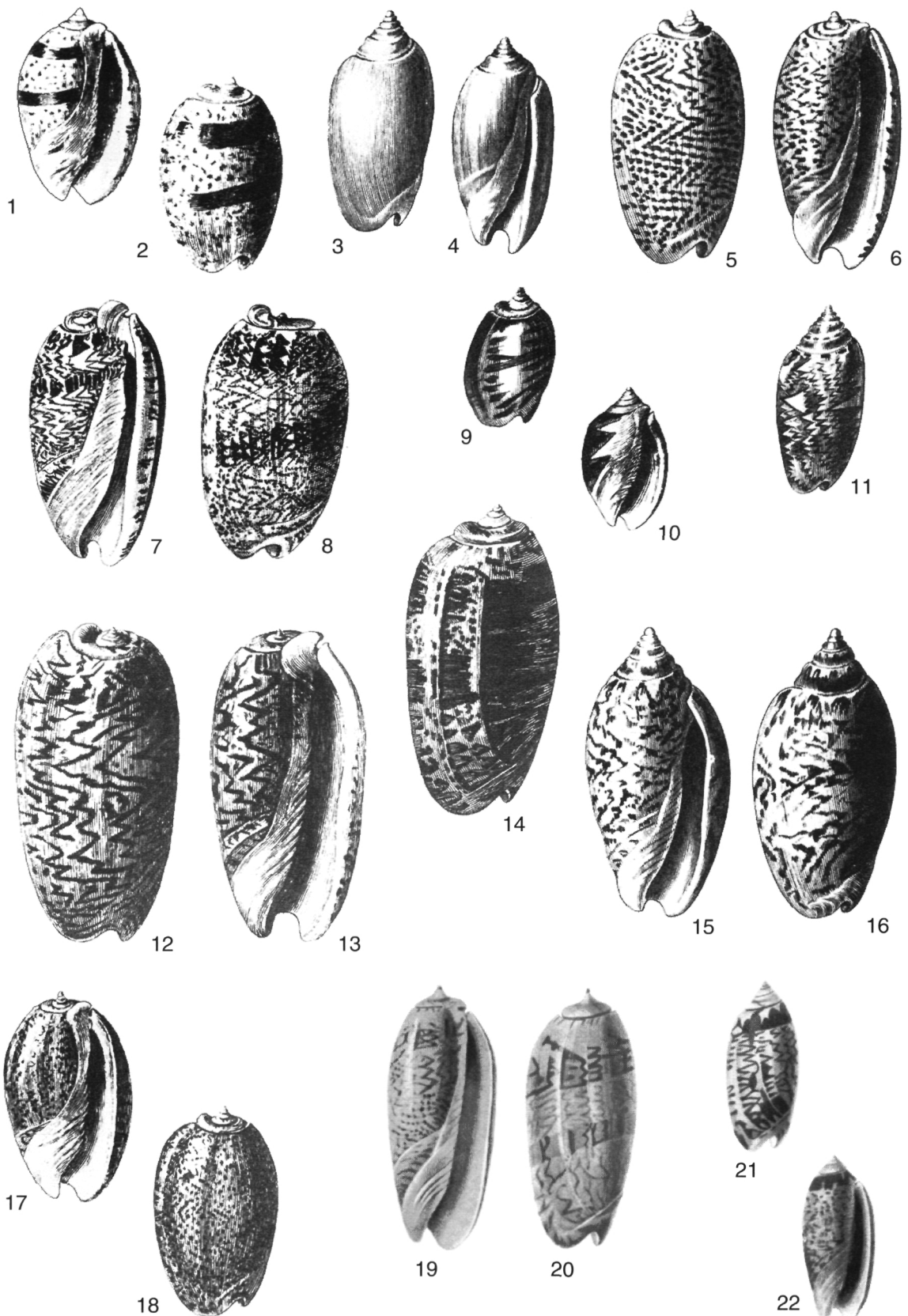
ORIGINAL DESCRIPTION: 54. Olive de Ceylan. *Oliva Zeilanica*. *O. testâ cylindraceâ, aurantio-luteâ; lineis longitudinalibus creberrimis undatim flexuosis fusco-coerulescentibus; spirâ exserto-acutâ, fusco-sublineatâ*. Habite les mers de Ceylan. M. Macleay. Mon cabinet. Espèce fort jolie par sa coloration, offrant, sur un fond d'un jaune presque orangé, quantité de lignes longitudinales serrées, ondées, légèrement fléchies, un peu en réseau, et d'un brun nué de bleu. Ouverture blanche. Longueur, 2 pouces 7 lignes.

DISCUSSION. This description could apply to many large, yellow olives and the name should be a **nomen dubium**. DUCLOS (1845: 17) considered this is a synonym of *tremulina* Lamarck, 1811, an opinion repeated by BURCH & BURCH (1960), ZEIGLER & PORRECA (1969) and WAGNER & ABBOTT (1978). For PETUCH & SARGENT (1986) it is a colour form of *O. tremulina* Lamarck, 1811.

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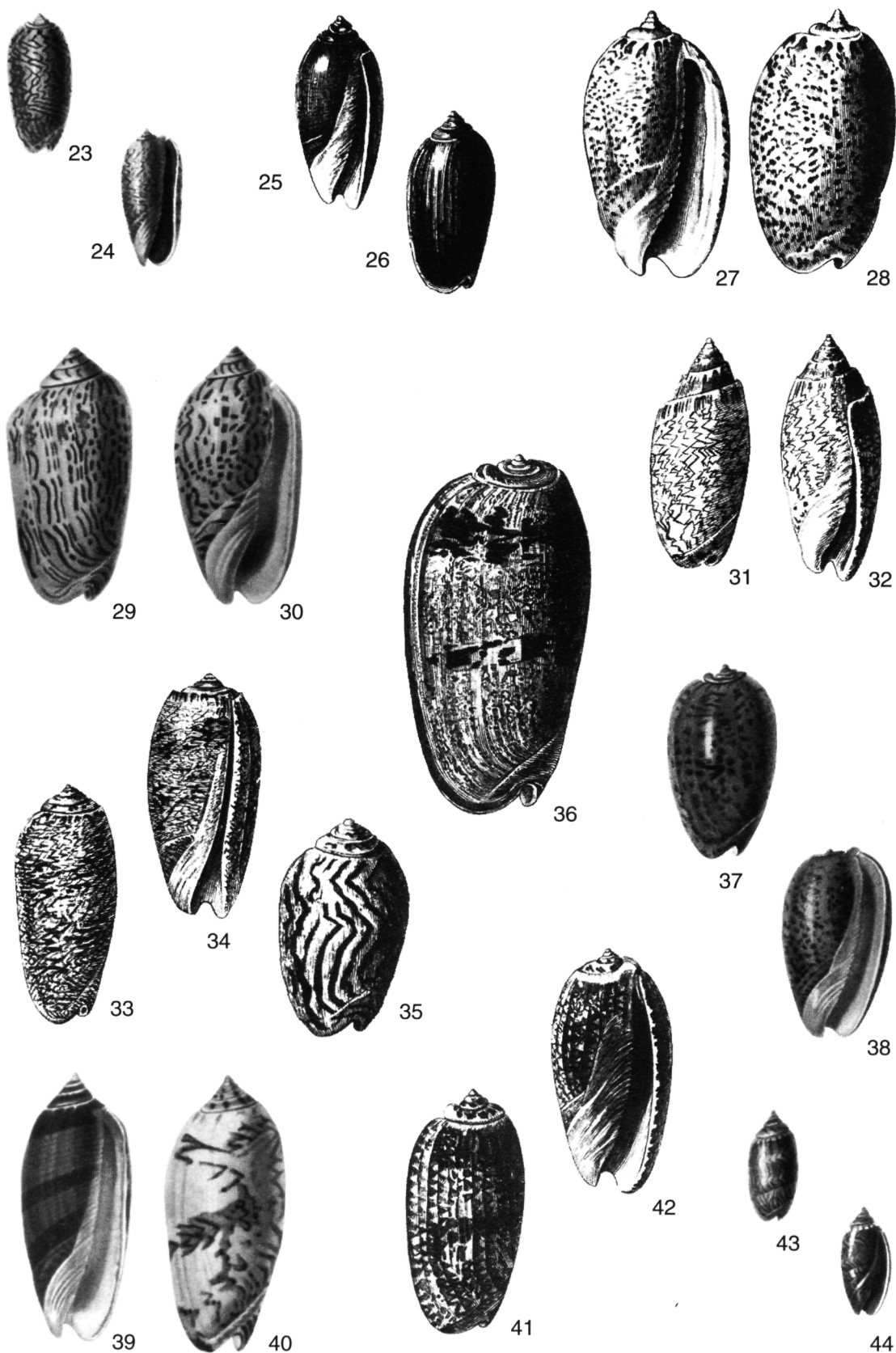
Figures 1-22.

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| 1, 2: | <i>O. bicingulata</i> Lamarck, 1811. | Encycl., Pl. 364, figs. 1a, 1b. |
| 3, 4: | <i>O. candida</i> Lamarck, 1811. | Encycl., Pl. 368, figs. 4a, 4b. |
| 5, 6: | <i>O. elegans</i> Lamarck, 1811. | Encycl., Pl. 367, figs. 3a, 3b. |
| 7, 8: | <i>O. elegans</i> Lamarck, 1811. | Encycl., Pl. 362, figs. 3a, 3b. |
| 9, 10: | <i>O. fabagina</i> Lamarck, 1811. | Encycl., Pl. 363, figs. 5a, 5b. |
| 11: | <i>O. flammulata</i> Lamarck, 1811. | Encycl., Pl. 367, fig. 5. |
| 12, 13: | <i>O. fulminans</i> Lamarck, 1811. | Encycl., Pl. 364, figs. 4a, 4b. |
| 14: | <i>O. funebris</i> Lamarck, 1811. | Encycl., Pl. 365, fig. 3. |
| 15, 16: | <i>O. fusiformis</i> Lamarck, 1811. | Encycl., Pl. 367, figs. 1a, 1b. |
| 17, 18: | <i>O. inflata</i> Lamarck, 1811. | Encycl., Pl. 364, figs. 5a, 5b. |
| 19, 20: | <i>O. irisans</i> Lamarck, 1811. | Duclos in Chenu, Pl. 30, figs. 7, 8. |
| 21, 22: | <i>O. lugubris</i> Lamarck, 1811. | Duclos in Chenu, Pl. 11, figs. 5, 6. |



Figures 23-44.

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| 23, 24: <i>O. mustelina</i> Lamarck, 1811. | Duclos in Chenu, Pl. 22, figs. 1, 2. |
| 25, 26: <i>O. oriola</i> Lamarck, 1811. | Encycl., Pl. 366, figs. 3a, 3b. |
| 27, 28: <i>O. peruviana</i> Lamarck, 1811. | Encycl., Pl. 367, figs. 4a, 4b. |
| 29, 30: <i>O. peruviana</i> Lamarck, 1811. | Duclos in Chenu, Pl. 16, figs. 9, 10. |
| 31, 32: <i>O. reticularis</i> Lamarck, 1811. | Encycl., Pl. 361, figs. 1a, 1b. |
| 33, 34: <i>O. scripta</i> Lamarck, 1811. | Encycl., Pl. 362, figs. 4a, 4b. |
| 35: <i>O. senegalensis</i> Lamarck, 1811. | Encycl., Pl. 364, fig. 3. |
| 36: <i>O. sepulchralis</i> Lamarck, 1811. | Encycl., Pl. 365, fig. 1. |
| 37, 38: <i>O. tigrina</i> Lamarck, 1811. | Duclos in Chenu, Pl. 21, figs. 7, 8. |
| 39, 40: <i>O. tremulina</i> Lamarck, 1811. | Duclos in Chenu, Pl. 11, figs. 3, 4. |
| 41, 42: <i>O. tricolor</i> Lamarck, 1811. | Encycl., Pl. 365, figs. 4a, 4b. |
| 43, 44: <i>O. undatella</i> Lamarck, 1811. | Duclos in Chenu, Pl. 5, figs. 5, 6. |



Index of *Oliva* names (valid names in *bold*).

"*O. alba* Lamarck" (auct.). Misquotation.

O. angulata Lamarck, 1811: objective junior synonym of *O. incrassata* (Lightfoot, 1786).

O. araneosa Lamarck, 1811: objective junior synonym of *O. spicata* (Röding, 1798).

O. avellana Lamarck, 1811: nomen dubium.

O. bicincta Lamarck, 1822: objective junior synonym of *O. bicingulata* Lamarck, 1811.

O. bicingulata Lamarck, 1811: subjective junior synonym (colour form) of *O. bulbosa* (Röding, 1798).

O. candida Lamarck, 1811: nomen dubium.

"*O. cruentata* Lamarck" (auct.). Misquotation.

O. decorticata Lamarck, 1811: nomen dubium.

O. dombeyana Lamarck, 1811: colour form of *O. peruviana* Lamarck, 1811.

O. elegans Lamarck, 1811: valid.

O. episcopalis Lamarck, 1811: subjective junior synonym of *O. caerulea* (Röding, 1798).

O. erythrostoma Lamarck, 1811: objective junior synonym of *O. miniacea* (Röding, 1798).

O. fabagina Lamarck, 1811: subjective junior synonym (maybe a form) of *O. bulbosa* (Röding, 1798).

O. flammulata Lamarck, 1811: valid.

O. fulminans Lamarck, 1811: colour form of *O. nigrita* (Karsten, 1789).

O. funebris Lamarck, 1811: nomen dubium.

O. fusiformis Lamarck, 1811: subjective junior synonym of *O. fulgurator* (Röding, 1798).

"*O. gibbosa* Lamarck": misquotation (and not an *Oliva*).

O. glandiformis Lamarck, 1811: nomen dubium.

O. granitella Lamarck, 1811: subjective junior synonym of *O. sericea* (Röding, 1798).

O. guttata Lamarck, 1811: junior homonym of *O. guttata* Fischer, 1807.

O. harpularia Lamarck, 1811: nomen dubium.

O. hepatica Lamarck, 1811: nomen dubium.

O. inflata Lamarck, 1811: subjective junior synonym of *O. bulbosa* (Röding, 1798).

O. irisans Lamarck, 1811: valid.

"*O. ispidus* Lamarck" (auct.): misquotation.

O. leucophaea Lamarck, 1811: objective junior synonym of *O. annulata* (Gmelin, 1791), itself a nomen dubium.

O. leucostoma Lamarck, 1811: objective synonym of *O. funebris* Lamarck, 1811.

"*O. leukophaea* Lamarck" auct.: misspelling for *O. leucophaea*.

O. litterata Lamarck, 1811: junior homonym of *O. litterata* (Röding, 1798), a nomen dubium.

O. lugubris Lamarck, 1811: subjective junior synonym (colour form) of *O. caerulea* (Röding, 1798).

O. maura Lamarck, 1811: objective junior synonym of *O. nigrita* (Karsten, 1789).

O. mustelina Lamarck, 1811: valid.

"*O. mustellina* Lamarck" auct.: misspelling for *O. mustelina*.

O. obtusaria Lamarck, 1811: nomen dubium.

O. oriola Lamarck, 1811: subjective junior synonym of *O. oliva* (L., 1758).

O. peruviana Lamarck, 1811: valid.

O. pica Lamarck, 1811: nomen dubium.

O. reticularis Lamarck, 1811: valid.

O. sanguinolenta Lamarck, 1811: objective junior synonym of *O. reticulata* (Röding, 1798).

O. scripta Lamarck, 1811: valid.

O. senegalensis Lamarck, 1811: subjective junior synonym of *O. peruviana* Lamarck, 1811.

"*O. sepulchralis* Lamarck" (auct.): misspelling for *O. sepulchralis* Lamarck, 1811.

O. sepulchralis Lamarck, 1811: subjective junior synonym of *O. nigrita* (Karsten, 1789).

O. tessellata Lamarck, 1811: objective junior synonym of *O. olivacea* (Karsten, 1789).

O. textilina Lamarck, 1811: objective junior synonym of *O. sericea* (Röding, 1798).

O. tigrina Lamarck, 1811: valid.

O. tremulina Lamarck, 1811: valid.

O. tricolor Lamarck, 1811: valid.

O. undata Lamarck, 1811: objective junior synonym of *O. bulbosa* (Röding, 1798).

O. undatella Lamarck, 1811: valid.

O. ustulata Lamarck, 1811: nomen dubium.

O. venulata Lamarck, 1811: objective junior synonym of *O. litterata* (Röding, 1798), itself a nomen dubium.

"*O. vermiculata* Lamarck" (auct.). Misquotation.

O. zeilanica Lamarck, 1811: nomen dubium.

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